

**In re the Application of BARRY DOUGLAS ARMOUR
U.S. Appln. No. 10/531,488
Attorney Docket No. 0074-516912**

REMARKS

The Applicants request that the Examiner reconsider the rejections set forth in the Final Official Action in view of the foregoing amendments and the following remarks. No new matter is added by the amendments to the claims.

Before discussing the various grounds of rejection and the manner in which the Applicants' claimed truck is distinguishable from the cited references, a brief review of the nature of the Applicants' claimed truck will be presented. A principle objective of the Applicants' claimed truck is to provide a solution for loading self-propelled vehicles and equipment onto a truck deck for transport. To achieve that objective the angle of the deck relative to the ground during loading and unloading must be shallow enough so that the leading end of the vehicle or equipment does not contact the deck before the wheels of the vehicle or equipment. Further, some types of vehicles, such as forklifts, cannot climb at an incline angle greater than about 12 degrees without assistance.

As described in the Background section of the present application the known solutions for the above-described problems are to use either ramps or sliding decks. The problems with ramps include the additional weight of the ramps, the need for space to store the ramps during transport, and the ramps must be manually assembled and disassembled for each loading and unloading. Further, in order to provide a shallow angle, the ramps must be quite long and thus their use requires a significant amount of space to be available behind the truck. Sliding decks are disadvantageous because they require the truck to have a second full length sub-frame, they add a significant amount of weight to the truck, thereby reducing the useful payload, they require a substantial amount of maintenance because of the complex mechanisms needed for operability, and they also require a significant amount of space behind the truck during loading and unloading in order to provide a shallow enough incline angle.

The Applicants' claimed truck has a modified chassis and sub-frame arrangement that allow the truck deck to lower and sit atop the rear wheels during loading and unloading. In the

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Applicant's claimed truck the rear suspension mechanism (springs, air bags, etc.) has a forward end that is connected to the truck chassis and a rear end that is connected to the deck. The truck chassis does not extend as far back as the conventional truck chassis, thereby reducing the overall weight of the truck. The deck tilts about a pivot axis that is located on the chassis and forward of the rear wheels and suspension. Because of the novel arrangement of the deck, chassis, and suspension in the Applicant's claimed truck, when the deck tilts rearwardly for loading or unloading of a vehicle, the forward part of the suspension and the rearmost part of the chassis move upward toward a part of the deck immediately above the forward part of the suspension. Consequently, a vertical spacing between the forward part of the suspension and that part of the deck is reduced. Also, the front end of the truck dips toward the ground. With this arrangement a part of the deck immediately above the rearmost axle lowers towards the rearmost wheels and preferably contacts the top of the wheels when the rearmost part of the deck contacts the ground, thereby providing a shallow loading/unloading angle. Also because of this arrangement the loading space behind the truck is significantly reduced compared to trucks with ramps or sliding decks. Moreover, the mechanism is relatively simple and easy to operate and maintain.

35 USC 102(b): Claims 1 to 11, 15, and 20-22

The Examiner rejected Claims 1 to 11, 15, and 20-22 as being anticipated by US 2,466,791 (Cook). In making the rejection, the Examiner reiterated his comments from the previous office action, but extended the rejection to cover claims 21 and 22.

In response to the previous office action, the applicants submitted arguments why the claims are not anticipated by Cook. In the "Conclusion" section of the office action, the examiner outlined why he believes the applicant's arguments filed 10 January 2008 are not persuasive. Specifically, the examiner stated:

Applicant argued that as the deck tilted rearward relative to the chassis, that the chassis did not tilt in any way. However, regardless of what else may be going on in the reference, if the deck is tilting rearwardly relative to the chassis then it must also be the case that the chassis is tilting

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forwardly relative to the deck. Although it is believed that the chassis tilts forwardly in other ways and that the chassis arguments by the applicant are not what the references say (in that the rotations limited in Cook column 2 are local relative torques of the axle housing the propeller shaft, not that there is no rotation at all as argued by applicant), the chassis arguments are moot since the claim limitations are met as mentioned above.

Applicant argued in the Cook reference that as the deck tilts rearwardly the forward part of the suspension arrangement does not move up because item 48 cannot rotate relative item 28 in that item 40' cannot meet this since it moves with the deck. However, the item 40' is moved higher than the center of the deck, **certainly moves upward relative to the rear and center of rotation of the deck** and thus meets the limitation as broadly recited in the current claims. Regarding the arguments against item 48 moving upwardly relative the deck, even if for sake argument 48 stays in place, when the deck tilts downward (rearward) then **in relative terms the item 48 does move upwardly as claimed**. Furthermore, other items such as item 58 are noted in the rejection as a pivot axis and would also be considered a forward part that moves upwardly relative to the deck as the deck tilts. *[Emphasis added]*

While the applicants disagree with the examiner's construction of the claim and interpretation of the reference, for the sake of expediting allowance the claims have been amended to clarify the distinctions over Cook. In Cook, both ends of the suspension are operatively connected to the deck support frame. In the applicants' truck as recited in amended claim 1, the forward part of the suspension arrangement is operatively connected to the chassis to **move with the chassis** and the rear part of the suspension arrangement is operatively connected to the deck or a deck support frame to **move with the deck or deck support frame**. In the amended claim, the deck is tiltable relative to the chassis about a **pivot axis that provides a center of rotation to deck or deck support frame relative to the chassis**.

In the "Conclusion" section, the examiner stated that item 58 is a pivot axis. However, item 58 in Cook is not a "pivot axis that provides a center of rotation of the deck or deck support frame relative to the chassis" as now recited. This amendment also addresses the examiner's interpretation used in relation to claim 7. In Cook, item 58 is a connection of a hydraulic ram to the deck, which ram is also connected to the chassis at point 52. Pivots 52, 58 and the ram 56 of Cook do not provide a center of rotation of the deck or deck support frame relative to the chassis

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as recited in the current claims. That is provided by item 24 in Cook. The examiner also stated that 58 could be “a forward part that moves upwardly relative to the deck as the deck tilts”. However, Claim 1 requires both a pivot axis and a forward part of the suspension arrangement. The examiner is construing item 58 to be both. Additionally, item 58 is not a part of the suspension arrangement as required by the claim.

The examiner stated that when the deck tilts rearwardly in Cook, the chassis tilts forwardly relative to the deck. In the amended claim, the chassis tilts forwardly relative to the ground and the forward part of the suspension arrangement moves with the chassis. That feature is not taught by Cook as previously argued by the applicants.

Notwithstanding that, the claim further recites that as the deck tilts rearwardly and the chassis tilts forwardly relative to the ground and the forward part of the suspension arrangement moves with the chassis, the forward part of the suspension arrangement moves upwardly toward a part of the deck immediately above the forward part of the suspension arrangement such that a vertical spacing between the forward part of the suspension arrangement and that part of the deck is reduced. Clearly that feature is not taught by Cook. As the front and rear ends of the suspension in Cook move with the deck, when the deck is tilted rearwardly the forward part of the suspension arrangement does not move upwardly toward a part of the deck immediately above the forward part of the suspension arrangement such that a vertical spacing between the forward part of the suspension arrangement and that part of the deck is reduced. If the forward part of the suspension arrangement in Cook could be considered item 48 (and applicants do not concur with that interpretation), due to the positioning of the deck pivot 24 relative to connection point 48 of the torque resisting means, even if the Cook chassis could tilt forwardly relative to the ground as the deck tilts rearwardly, the vertical spacing between point 48 and the part of the deck immediately above point 48 would be increased not reduced.

The result of applicants’ claimed configuration is that as the forward part of the suspension arrangement moves upwardly toward a part of the deck immediately above the forward part of the suspension arrangement to reduce a vertical spacing therebetween, a part of

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the deck immediately above the rearmost axle lowers towards the rearmost axle. That provides a low loading angle of the deck. The applicants' claimed truck is fundamentally different from Cook both in the claimed layout and the result of that layout. The Cook truck, by having a front and rear ends of the suspension operatively connected to the deck, creates a steep tilt angle to assist with dumping items from the deck. That is a desired result for the Cook truck, which "relates to improvements in vehicle construction of the transport type, and more particularly, relates to motorised dump trucks and trailers of the self-unloading type" (column 1, lines 1-4 of Cook).

The applicants' truck, by having the front of the suspension operatively connected to the chassis to move with the chassis and the rear end of the suspension operatively connected to the deck or deck support frame to move with the deck or deck support frame, with the configuration claimed, creates a shallow tilt angle to ease loading of items onto the deck. The desired outcomes of the applicants' truck and the Cook truck are polar opposites. By providing a low loading angle, the applicants' truck is particularly suited to self-propelled loading and unloading of vehicles and plant. Cook's deck angle of 30 degrees (and greater in the embodiment of Figure 6) means the Cook truck would be unsuitable for self-propelled loading of vehicles and plant.

Accordingly, the applicants submit that the invention recited in independent claim 1 is not anticipated by Cook, and is non-obvious over Cook. Claims 2 to 11 and 15 depend from claim 1 either directly or indirectly, and thus, include all of the features set forth in claim 1. Therefore, claims 2 to 11 and 15 are not anticipated by and are non-obvious over Cook for at least the same reasons as claim 1.

The applicants' claimed truck is set forth in claim 20 includes all of the features set forth in claim 1. Therefore, claim 20 is not anticipated by and is non-obvious over Cook for at least the same reasons as claim 1. Moreover, claim 20 includes the feature that the pivot axis that provides a center of rotation of the deck or deck support frame relative to the chassis is located in front of the forward part of the suspension arrangement. In the truck described and shown in

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Cook, the pivot axis 24 of the frame 19 is located behind the forward part of the suspension spring 40.

The applicants' claimed truck is set forth in claim 21 includes all of the features set forth in claim 1. Therefore, claim 21 is not anticipated by and is non-obvious over Cook for at least the same reasons as claim 1. Moreover, claim 21 includes the feature that the forward part of the suspension arrangement is connected to the chassis at a chassis operative connection, and that the pivot axis that provides a center of rotation of the deck or deck support frame relative to the chassis is located in front of the chassis operative connection. In the truck described and shown in Cook, the pivot axis 24 of the frame 19 is located behind the forward part of the suspension spring 40. Claim 22 depends from claim 21, and is allowable for at least the same reason as claim 21.

35 USC 103(a): Claims 12, 13, and 14

The Examiner rejected Claims 12, 13, and 14 under 35 USC 103(a) as being unpatentable over Cook in view of US 5,887,880 (Mullican et al.). In explaining this rejection the Examiner stated:

Re claims 12, 14, Cook does not teach an opening or cover in the deck for the springs or their connectors to pass thru [sic]. Mullican teaches a suspension system wherein the deck includes a pair of apertures, shaped recesses or moveable covers (for suspension or wheels, see figures) which enable the front ends of the suspension (leaf springs and/or the spring connectors) to extend above a lower part of the deck when the deck is tilted in order to reduce the tilt angle when loading/unloading. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Cook by the general teaching of Mullican to have a suspension system wherein the deck includes a pair of apertures, shaped recesses or moveable covers which enable the front ends of the leaf springs and/or the spring connectors to extend above a lower part of the deck when the deck is tilted in order to reduce the tilt angle when loading/unloading.

Re claim 13, Cook teaches the suspension arrangement includes a pair of spaced apart leaf springs, with the front ends of

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the leaf springs operatively connected to the chassis, but does not teach the rear ends of the leaf springs operatively connected to the deck or deck support frame via respective air bags configured to enable air to be expelled as the deck is tilted, thereby further lowering the deck towards the rearmost axle. Mullican teaches a suspension system wherein an end of the suspension is operatively connected to the deck or deck support (generally 36, etc.) frame via respective air bags (generally 46) configured to enable air to be expelled as the deck is tilted, thereby further lowering the deck towards the rearmost axle in order to assist in loading/unloading. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Cook by the general teaching of Mullican to have a suspension system wherein an end of the suspension is operatively connected to the deck or deck support frame via respective air bags configured to enable air to be expelled as the deck is tilted, thereby further lowering the deck towards the rearmost axle in order to assist in loading/unloading.

This rejection fails to raise a *prima facie* case of unpatentability because it is not based on substantial evidence. More specifically, Mullican et al. does not describe the features that are missing from Cook relative to the Applicants' claimed truck as set forth in Claim 1. In Mullican et al., there is no teaching or suggestion of operatively connecting a forward end of the suspension arrangement to the chassis to move with the chassis and a rearward end of the suspension arrangement to the deck or the deck support frame to move with the deck or deck support frame. Moreover, the chassis and the deck of the truck described and shown in Mullican et al. are not arranged such that as the deck tilts rearwardly, the chassis tilts forwardly relative to the ground. In the truck described in Mullican et al., the chassis moves in the same direction as the deck. See, Figs. 1 and 2 of Mullican et al. Further, the deck and suspension system of the Mullican et al. truck are not arranged such that as the deck tilts rearwardly the forward part of the suspension arrangement moves upwardly toward the part of the deck immediately above the forward part of the suspension arrangement. In the truck described in Mullican et al., the front and rear suspension members are directly connected to the deck. See, Figs. 3 to 6 of Mullican et al. Therefore, the forward part of the suspension arrangement cannot move upwardly toward the deck.

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Claims 12, 13, and 14 are dependent from Claim 1 either directly or indirectly, and thus, include all of the features set forth in Claim 1. The proposed combination of Cook and Mullican et al. does not anticipate the Applicants' claimed truck as set forth in any of Claim 12, 13, or 14. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. MPEP 2143.03 and cases cited therein. Since the proposed combination does not include all of the features of Claims 12, 13, or 14, the rejection of those claims under 35 USC 103(a) is improper and should be withdrawn.

35 USC 103(a): Claims 16 to 19

Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of US 6,461,096 (Mentele et al.). In making this rejection, the Examiner stated:

Re claim 16, Cook does not teach a ramp but Mentele teaches a ramp at or towards the rear end of the deck and which is moveable from a storage position to a loading/unloading position in order to help with safety and uneven terrain (column 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Cook by the teaching of Mentele to have a ramp at or towards the rear end of the deck and which is moveable from a storage position to a loading/unloading position in order to help with safety and uneven terrain.

Re claim 17, Cook as already modified by Mentele in claim 16 teaches the ramp configured to automatically move to the loading/unloading position as the deck is tilted, and to automatically move to the storage position as the deck is retracted from a tilted position.

Re claim 18, Cook as already modified by Mentele in claim 16 teaches the ramp pivotally connected to the deck or deck support frame.

Re claim 19, Cook as already modified by Mentele in claim 16 teaches the ramp foldable across its width, and as configured to automatically fold in the storage position and unfold in the loading/unloading position.

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This rejection fails to raise a *prima facie* case of unpatentability because it is not based on substantial evidence. More specifically, Mentele et al. does not describe the features that are missing from Cook relative to the Applicants' claimed truck as set forth in Claim 1. In Mentele et al., there is no teaching or suggestion of operatively connecting a forward end of the suspension arrangement to the chassis to move with the chassis and a rearward end of the suspension arrangement to the deck or the deck support frame to move with the deck or deck support frame. Moreover, the chassis and the deck of the truck described and shown in Mentele et al. are not arranged such that as the deck tilts rearwardly, the chassis tilts forwardly relative to the ground. Further, in Mentele et al., as the deck tilts rearwardly, the forward part of the suspension arrangement does not move upwardly toward the part of the deck immediately above the forward part of the suspension arrangement. In the truck described and shown in Mentele et al., the front and rear suspension members are connected to the chassis and the deck slides relative to the chassis from the horizontal position to the tilted position.

Claims 16 to 19 are dependent from Claim 1 either directly or indirectly, and thus, include all of the features set forth in Claim 1. The proposed combination of Cook and Mentele et al. does not anticipate the Applicants' claimed truck as set forth in any of Claims 16 to 19 because all of the features set forth in those claims are not taught or suggested by the proposed combination of references. Therefore, the rejection of Claims 16 to 19 under 35 USC 103(a) is improper and should be withdrawn.

New Claims

Claims 23 to 26 are being added to the application. Claim 23 is a dependent claim that includes all of the features of claim 1 and the additional feature that an underside of the deck contacts the wheels when the deck is tilted rearwardly.

Claim 24 is an independent claim. The applicant submits that this claim is novel and non-obvious over the references cited by the examiner in the office action. The claim requires a chassis having a forward portion that supports a cab, a terminal portion that terminates at a location forward of the rear axle and wheel assembly, and a pivot portion located between the

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forward portion and the terminal portion. Additionally, the claim requires a suspension spring having a forward part connected to the terminal portion of the chassis (which is rearward of the pivot portion), a rearward part connected to the rearward portion of the deck, and an intermediate part connected to the rear axle and wheel assembly.

In Cook, the pivot portion of the chassis is at its rearmost end. There is not a forward portion, a terminal portion, and a pivot portion between the forward portion and the terminal portion. In Cook, the front and rear ends of the suspension spring are connected to the deck support frame. The suspension spring does not have a forward part connected to the terminal portion of the chassis as claimed. Claim 24 also recites the effect of the claimed layout; namely, that when the deck is tilted rearwardly about the pivot axis, the chassis tilts forwardly relative to the ground and the forward part of the suspension spring moves with the chassis such that said forward part of the suspension spring moves toward a part of the deck immediately above the forward part of the suspension spring such that a vertical spacing between the forward part of the suspension spring and that part of the deck is reduced, and such that a part of the deck immediately above the rearmost axle lowest towards the rearmost axle to provide a low loading angle for the deck.

Again, the applicants submit that claim 24 is novel and non-obvious over the references cited by the Examiner for the reasons outlined in relation to claim 1. Claims 25 and 26 are dependent from claim 24, and are allowable for at least the reasons outlined in relation to claim 24.

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CONCLUSION

In view of the foregoing amendments and remarks, it is believed that the claims of this application are in condition for allowance. The Applicants respectfully request that the Examiner reconsider the rejections of the claims in the light of the amendments and remarks presented herein. If any matter remains outstanding, the examiner is requested to initiate a phone interview with the attorney below.

Respectfully submitted,

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